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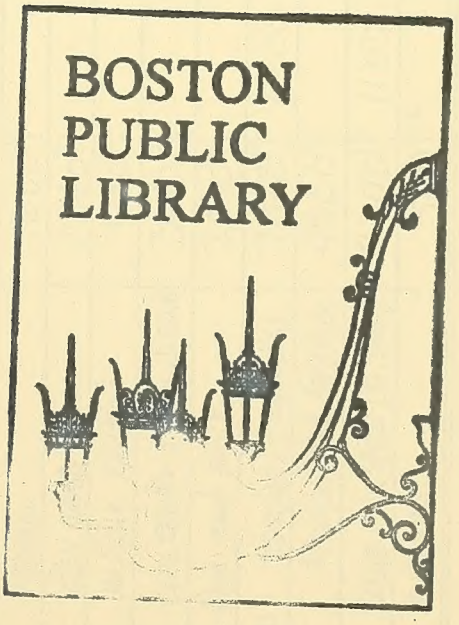
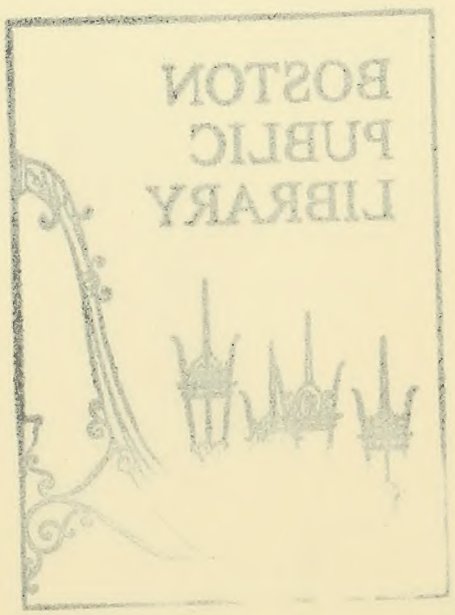
COST MATRIX AND FINANCIAL ANALYSIS




BOSTON
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SOURCES OF CAPITAL COSTS

(in $ 000)

	TOTAL	developer	Federal	State	city/county	MDC	MBTA	renters assoc	private	TOTAL
LAND -	8000[1]	1750	2750[2]	1756	1750					8000
LANDFILL -	500[3]	500								500
TRANSPORTATION - mass transit	20700[4]		13800				6900			20700
arterial roads, bridges, cause	10810[5]	10810								10810
interior roads	750	750								750
sidewalks	1020	1020								1020
minibus system	400[6]							400		400
UTILITIES - water (trunk)	1300[7]	390	910							1300
water (branch)	1500	450	1050							1500
sanitary & storm sewers (trunk)	1170	350	820							1170
sanitary & storm sewers (branch)	1500	450	1050							1500
elec, gas, phone, etc	20000[8]								20000	20000
COMMUNITY FACILITIES - education	27010[9]			14240	7130				5640	27010
health	1600[10]		1100		500					1600
day care	1260[11]		840					420		1260
media centers	900[12]		450		450					900
civic center & branch centers	3100[13]		1400		1000			700		3100
fire and police	2000[14]				2000					2000
RECREATION beaches (& seawalls)	7800[15]	2300	3750			1750				7800
neighborhood facilities	4500[16]		2420					2080		4500
large open space (F. Strong)	2200[17]	1100	850	250						2200
marinas.	500[18]						250	250	250	500
TOTALS	118,520	19,871	31,189	16,240	12,830	1750	6900	3850	25,890	118,520

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SOURCES OF OPERATING COSTS
(in $ 000)

	TOTAL	Federal	State	City	MDC	MBTA	renters assoc	private	user fees or gifts	TOTAL
TRANSPORTATION										
mass transit	4,238[1]					*			4,238	4,238
arterial roads/bridges/cause	205[2]			205						205
interior roads	110[2]			110						110
sidewalks	050[2]			50						50
mini bus system	530[2]						*		530	530
UTILITIES										
sewers	625				*				625	625
water	375			*					375	375
COMMUNITY FACILITIES										
education	8,045[3]	4,005	1,701	1,000				1,248		8,045
health facilities	2,000[4]	1,500	300	100			100			2,000
day care	3,552	1,776					* 100		1,676	3,552
media centers	400	400								400
community centers	1,000	800					* 100		100	1,000
fire and police	2,637			2,637						2,637
RECREATION FACILITIES										
beaches	600				600					600
neighborhood rec facilities	260			160			* 100			260
large open space	150		50		100					150
marinas							*		SELF-SUSTAINING	
GENERAL GOVERNMENT	700			700						700
TOTALS	25,477	8,481	2,051	4,962	700		400	1,248	7,544	25,477

* = OPERATING AGENCY; SEE "USER FEE" COLUMN FOR OPERATING COSTS.

PROPERTY TAX REVENUES

INCOME GROUP	AVE. INCOME	AVE. * MONTHLY RENT	AVE. YEARLY RENT	UNITS	TAX RATE: % OF GROSS RENT	TAX REVENUES
0-4	$3,000	$62.50	$750	1260	5%	$47,250
4-7	$5,500	$114.50	$1375	3780	15%	$780,000
7-10	$8,500	$176.50	$2,120	3780	20%	$1,825,000
10-14	$12,000	$250.00	$3,000	2520	20%	$1,512,000
14+	$16,000	$333.50	$4,000	1260	20%	$1,008,000
COMMERCIAL: 2,012,000 SF @ $.60/SF =						$1,207,000
TOTAL TAX REVENUES =						$6,379,000

* AVE. UNIT = 2 BEDROOMS

DEVELOPMENTAL STAGING ANALYSIS

STAGING

		1	2	3	4	5	6	7	8	9	10	totals
Long	housing units							480 390	480 480 390	480 480 510	480 240 510	4920
	residential acres							8 13	4 8 13	4 8 17	4 4 17	100
	commercial acres							2	3	2	1	8
	persons							2958	4590	4998	4182	16,728
	development time											
Spectacle	housing units						240 300	180 240 300	480 300			2340
	residential acres						4 10	4 4 10	4 10			46
	commercial acres						1	2	1			4
	persons						1836	3468	2652			7956
	development											
Thompson's	housing units			240 480	480 240 420	480 240 420	240 480					3720
	residential acres			4 16	4 4 14	4 4 14	4 16					84
	commercial acres			5	10	5	5					25
	persons			2448	3876	3876	2448					12,646
	development											
Columbia Pt	housing units		360 450	360 450								1620
	residential acres		6 15	6 15								42
	commercial acres		2	1								3
	persons		2754	2754								5508
	development											
totals	population increase/year		2754	5202	3876	3876	4284	6426	7242	4998	4182	
	cumulative population		2754	7956	11,832	15,708	19,992	26,418	33,660	38,658	42,840	

= HOUSING CONSTRUCTION

note: the three sub-columns beneath each year refer to housing densities: high, medium and low.

LAND SALES BY IN[illegible]EAR AND DENSITY

	density	1 H	1 M	1 L	2 H	2 M	2 L	3 H	3 M	3 L	4 H	4 M	4 L	5 H	5 M	5 L	6 H	6 M	6 L	7 H	7 M	7 L	8 H	8 M	8 L	9 H	9 M	9 L	10 H	10 M	10 L	totals:
Long	0-4																			42/0.8	39/1.3	48/0.4	48/0.8	39/1.3	48/0.4	48/0.8	51/1.7	48/0.4	24/0.4	51/1.7	492/10.0
	4-7																			144/2.4	117/3.9	144/1.2	144/2.4	117/3.9	144/1.2	144/2.4	153/5.1	144/1.2	72/1.2	153/5.1	1476/30.0
	7-10																			144/2.4	117/3.9	144/1.2	144/2.4	117/3.9	144/1.2	144/2.4	153/5.1	144/1.2	72/1.2	153/5.1	1476/30.0
	10-14																			96/1.6	78/2.6	96/0.8	96/1.6	78/2.6	96/0.8	96/1.6	102/3.4	96/0.8	48/0.8	102/3.4	984/20.0
	14+																			48/0.8	39/1.3	48/0.4	48/0.8	39/1.3	48/0.4	48/0.8	51/1.7	48/0.4	24/0.4	51/1.7	492/10.0
Spectacle	0-4																24/0.4	30/1.0		48/0.4	24/0.4	30/1.0	48/0.4		30/1.0							234/4.6
	4-7																72/1.2	90/3.0		144/1.2	72/1.2	90/3.0	144/1.2		90/3.0							702/13.8
	7-10																72/1.2	90/3.0		144/1.2	72/1.2	90/3.0	144/1.2		90/3.0							702/13.8
	10-14																48/0.8	60/2.0		96/0.8	48/0.8	60/2.0	96/0.8		60/2.0							468/9.2
	14+																24/0.4	30/1.0		48/0.4	24/0.4	30/1.0	48/0.4		30/1.0							234/4.6
Thompson's	0-4							24/0.4	48/1.6		48/0.4	24/0.4	42/1.4	48/0.4	24/0.4	42/1.4	24/0.4	48/1.6															372/8.4
	4-7							72/1.2	144/4.8		144/1.2	72/1.2	126/4.2	144/1.2	72/1.2	126/4.2	72/1.2	144/4.8															1116/25.2
	7-10							72/1.2	144/4.8		144/1.2	72/1.2	126/4.2	144/1.2	72/1.2	126/4.2	72/1.2	144/4.8															1116/25.2
	10-14							48/0.8	96/3.2		96/0.8	48/0.8	84/2.8	96/0.8	48/0.8	84/2.8	48/0.8	96/3.2															744/16.8
	14+							24/0.4	48/1.6		48/0.4	24/0.4	42/1.4	48/0.4	24/0.4	42/1.4	24/0.4	48/1.6															372/8.4
Columbia Pt	0-4				36/0.6	45/1.5		36/0.6	45/1.5																							162/4.2
	4-7				108/1.8	135/4.5		108/1.8	135/4.5																							486/12.6
	7-10				108/1.8	135/4.5		108/1.8	135/4.5																							486/12.6
	10-14				72/1.2	90/3.0		72/1.2	90/3.0																							324/8.4
	14+				36/0.6	45/1.5		36/0.6	45/1.5																							162/4.2
totals: acres	0-4					0.6	1.5		1.0	3.1	0.4	0.4	1.4	0.4	0.4	1.4		0.8	2.6	0.4	1.2	2.3	0.8	0.8	2.3	0.4	0.8	1.7	0.4	0.4	1.7	27.2
	4-7					1.8	4.5		3.0	9.3	1.2	1.2	4.2	1.2	1.2	4.2		2.4	7.8	1.2	3.6	6.9	2.4	2.4	6.9	1.2	2.4	5.1	1.2	1.2	5.1	81.6
	7-10					1.8	4.5		3.0	9.3	1.2	1.2	4.2	1.2	1.2	4.2		2.4	7.8	1.2	3.6	6.9	2.4	2.4	6.9	1.2	2.4	5.1	1.2	1.2	5.1	81.6
	10-14					1.2	3.0		2.0	6.2	0.8	0.8	2.8	0.8	0.8	2.8		1.6	5.2	0.8	2.4	4.6	1.6	1.6	4.6	0.8	1.6	3.4	0.8	0.8	3.4	54.4
	14+					0.6	1.5		1.0	3.1	0.4	0.4	1.4	0.4	0.4	1.4		0.8	2.6	0.4	1.2	2.3	0.8	0.8	2.3	0.4	0.8	1.7	0.4	0.4	1.7	27.2

note: numbers refer to units/acres

Land Values
(in dollars)

Density		HIGH	MEDIUM	LOW
Public Housing	PRICE/ACRE	132,000	90,000	51,000
	PRICE/UNIT	1100	1500	1700
Moderate Housing	PRICE/ACRE	216,000	132,000	72,000
	PRICE/UNIT	1800	2200	2400
Market Housing	PRICE/ACRE	300,000	174,000	93,000
	PRICE/UNIT	2500.	2900	3100
Commer-cial	PRICE/ACRE			100,000

LAND S .Y YEAR .ND TYPE

(in $ 000)

		1			2			3			4			5			6			7			8			9			10			totals
	density	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	
Public housing	acres					0.6	1.5		1.0	3.1	0.4	0.4	1.4	0.4	0.4	1.4		0.8	2.6	0.4	1.2	2.3	0.8	0.8	2.3	0.4	0.8	1.7	0.4	0.4	1.7	27.2
	sales value					54	77		90	158	53	36	71	53	36	71		72	132	53	108	117	106	72	117	53	72	87	53	36	87	1,864
Moderate	acres					1.8	4.5		3.0	9.3	1.2	1.2	4.2	1.2	1.2	4.2		2.4	7.8	1.2	3.6	6.9	2.4	2.4	6.9	1.2	2.4	5.1	1.2	1.2	5.1	81.6
	sales value					238	324		396	670	259	158	302	259	158	302		316	562	259	475	497	518	316	497	259	316	367	259	158	367	8,232
Market housing	acres					3.6	9.0		6.0	18.6	2.4	2.4	8.4	2.4	2.4	8.4		4.8	15.6	2.4	7.2	13.8	4.8	4.8	13.8	2.4	4.8	10.2	2.4	2.4	10.2	163.2
	sales value					626	837		1,044	1,730	720	417	782	720	417	782		834	1,452	720	1,252	1,283	1,440	834	1,283	720	834	948	720	417	948	21,760
Total	acres				21.0			41.0			22.0			22.0			34.0			39.0			39.0			29.0			25.0			272.0
	sales value				2,156			4,088			2,798			2,798			3,368			4,764			5,183			3,656			3,045			31,856
Commercial	acres				2.0			6.0			10.0			5.0			6.0			4.0			4.0			2.0			1.0			40.0
	sales value				200			600			1,000			500			600			400			400			200			100			4,000

INFRA[illegible]TURE STAGING
([illegible]00)

Year	]	2	3		5	6	7	8	9	10	0-10
LAND	8,000										8,000
LANDFILL						500					500
TRANSPORTATION:											
MASS TRANSIT	6,450	2,600	2,300	2,600	3,950	200	650	450	750	750	20,700
ATERIAL ROAD NETWORK	4,670	90		2,160	2,800	840	250				10,810
INTERIOR ROADS		100	100	100	100	50	150	150			750
SIDEWALKS		70	190	190	40	20	260	250			
MINIBUS SYSTEM		30	50	40	40	60	60	50	40	30	400
UTILITIES:											
SEWERS (TRUNK)	210	540			120	300					1,170
SEWERS (BRANCH)		200	200	200	200	100	300	300			1,500
WATER (TRUNK)	210	490		180	120	300					1,300
WATER (BRANCH)		200	200	200	200	100	300	300			1,500
ELEC., GAS, PHONE	2,500	2,500	2,500	2,500	2,500	2,500	2,000	1,000	1,000	1,000	20,000
COMMUNITY FACILITIES:											
EDUCATION		300	3,060	2,930	430	3,880	4,090	7,680	4,010	630	27,010
HEALTH FACILITIES		100	100	100	100	100	850	100	100	50	1,600
FIRE & POLICE		100	600		100	100	1,000		100		2,000
DAY CARE		80	140	110	110	130	320	170	100	100	1,260
MEDIA CENTERS		20	30	120	20	20	40	490	130	30	900
COMMUNITY CENTER & MAIN CIVIC CENTER		250	250		250	250	1,350	500	250		3,100
RECREATION FACILITIES:											
BEACHES & SEAWALLS		[illegible]	1,000	1,000	1,000	1,750	1,750	1,000	1,300		7,800
NEIGHBORHOOD PARKS, REC. CENTERS, ATHLETIC FAC.		300	600	400	400	500	700	800	400	400	4,500
LARGE OPEN SPACE (D FT. STRONG)			200	500			800	700			2,200
MARINAS					250				250		500
TOTALS	22,040	7,970	11,520	13,330	12,730	10,700	14,870	13,940	8,430	2,990	118,520

..PER..S FINANCE STAGIN
(in $ 000)

COSTS

Year	1	2	3	4	5	6	7	8	9	10	0-10
LAND	1,750										1,750
LANDFILL						500					500
TRANSPORTATION (NOT INCLUDING MASSTRANSIT)	4,670	290	340	2,490	2,980	970	720	450	40	30	12,980
UTILITIES (WATER, SEWER)	420	1,430	400	580	640	800	600	600			5,470
COMMUNITY FACILITIES (COMM. CTRS. + DAYCARE)		330	390	110	360	380	1,170	170	350	100	3,360
RECREATION (ALL EXCEPT ONE PRIVATE MARINA)		300	1,800	1,900	1,650	1,250	3,250	2,500	1,700	400	14,750
PLANNING + ADMIN.	2,000	1,500	1,250	1,000	1,000	750	750	750	500	500	10,000
FINANCING	660	660	710	510	650	710	650	490	210		5,250
TOTAL CASH REQUIREMENTS	9,500	4,510	4,890	6,590	7,280	5,360	7,140	4,960	2,800	1,030	54,060

REVENUES

RESIDENTIAL LAND SALES		2,156	4,088	2,798	2,798	3,368	4,764	5,183	3,656	3,045	31,856
COMMERCIAL LAND SALES		200	600	1,000	500	600	400	400	200	100	4,000
FED. WATER, SEWER GRANTS	294	1,001	280	406	448	560	420	420			3,829
RECREATION GRANTS: (FED., STATE, MDC)		200	1,150	1,200	950	850	2,120	1,450	1,100		9,020
PLANNING GRANTS	1,250	750	750	500	500	250	250	250	250	250	5,000
RENTERS ASSOC.		20	60	90	105	150	195	250	290	320	1,480
FED. COMMUNITY FAC. GRANTS		220	260	70	240	250	780	120	240	60	2,240
GROSS CASH INCOME	1,544	4,547	7,188	6,064	5,541	6,028	8,929	8,073	5,736	3,775	57,425
CASH REQUIREMENTS	9,500	4,510	4,890	6,590	7,280	5,360	7,140	4,960	2,800	1,050	54,060
NET CASH (REQUIREMENT) or BENEFIT	(7,956)	37	2,298	(526)	(1,739)	668	1,789	3,113	2,936	2,745	
CUMULATIVE CASH (REQUIREMENT) or BENEFIT	(7,956)	(7,919)	(5,621)	(6,147)	(7,886)	(7,218)	(5,429)	(2,316)	620	3,365*	

*RENTERS ASSOC. DEBT TO DEVELOPER = 2,370

TOTAL DEVELOPER SURPLUS = 5,635

TOPIC AREAS	ASSUMPTIONS	CAPITAL COSTS add 000	OPERATING COSTS add 000	SOURCE OF CAPITAL COSTS: Federal Source	Federal Amt.	State & Other Source	State & Other Amt.	Developer Source	Developer Amt.	SOURCE OF OPERATIVE COSTS: Federal Source	Federal Amt.	State & Other Source	State & Other Amt.	Developer Source	Developer Amt.
UTILITIES															
WATER	dev't deposit developer will install water lines; sold to city after 5 years	462 1848	375	50% grants & 100% loans	1848	city 75%			462			fee by Boston's water Division	375		
SEWERS	sanitary storm	976 396	125	50% grants loans 100%	732 396	city 25% city 100%	244					fee by MDC	125		
SEWAGE TREATMENT	transfer sewage treatment to Deer Is. by pipeline	3,000	500	50% grants loans 100% grants R&D 75%	2250	state 30% 25%	750					fee by MDC	500		
OTHER UTILITIES	INCLUDES: gas electric phone (detailed figures not available until physical plan completed)	20,000				costs by indiv. utility company									
			1,000		5226		20,994		462				1000		
	GRAND TOTAL	26,682							26,682						

TOPIC AREAS	ASSUMPTIONS	CAPITAL COSTS	OPERATING COSTS	SOURCE OF CAPITAL COSTS						SOURCE OF OPERATIVE COSTS					
				Federal		State & Other		Developer		Federal		State & Other		Developer	
				Source	Amt.	Source	Amt.	Source	Amt.	Source	Amt.	Source	Amt	Source	Amt.
SING															
ER CLASS lic Housing) -$4,000/yr.	500 high density (120/acre) 300 Long, 200 Thomp 1000 medium density (50/acre) 600 Long, 400 Thomp 1500 NO LAND COSTS (24 acres)		for figures on housing, see the Sheet on Housing: Basic Assumptions, General, p.												
RKING CLASS derate Income) -$7,000/yr.	1800 high density @$1500/acre 1080 Long, 720 Thomp 2700 medium density @$1500 1620 Long, 1080 Thomp 4500 @ $500/unit land cost 69 acres @ $25,000 acre site development=$1,000/unit														
ER-MIDDLE CLASS iddle income) -$10,000/yr	1800 high density 1080 Long, 720 Thomp 2700 medium density 1620 Long, 1080 Thomp 4500 @ $1000/unit 69 acres @ $50,000 acre site development=$1200/unit														

TOPIC AREAS	ASSUMPTIONS	CAPITAL COSTS ADD 000	OPERATING COSTS ADD 000	SOURCE OF CAPITAL COSTS: Federal Source	Federal Amt.	State & Other Source	State & Other Amt.	Developer Source	Developer Amt.	SOURCE OF OPERATIVE COSTS: Federal Source	Federal Amt.	State & Other Source	State & Other Amt.	Developer Source	Developer Amt.
COMMUNITY SERVICES AND FACILITIES															
COMMUNITY CENTERS	Some central facilities and some dispersed	2,100	1,000	HUD 703 2/3 grant	1,400	Private	350	Land	350	HEW NSF GRANTS OEO 203	800	U.C.S. Private	200		
LIBRARIES	Central and dispersed; related to community schools	900	400	HEW Library Services & const Grant 1/2	450					HEW Higher Ed. Act	500				
				HUD PUB FAC. LOAN	450										
POLICE	Central and facilities dispersed	1,000	1,750	HUD PUB FAC. LOAN	1,000					SAFE STREETS ACT, JUSTICE DEPT	500			BOSTON P.D.	1,250
FIRE	Two stations	1,000	1,300	HUD PUB. FAC. LOAN	1,000									BOSTON F.D.	1,300
DAY CARE	4500 children ages 0-5ys integrated into residential facilities	2,700	8,100	HUD 703 2/3 grant	1,800	Private	450	Land	450	OEO HEW WELFARE	5000	Private UCS & Fees	3,100		
HEALTH SERVICES	Two offices/comprehensive health centers ;nursing homes and extended care facilities in apartments for elderly	1,600	2,000	Hill-Burton 2/3 grant	1,100					HEW Comp Health Planning 2/3 OEO 100% grant	1500	Private State Health Dept.	500		
				Pub-Fac. Loan HUD	500										
SCHOOLS	elementary - 7000 children included in residential areas	5,600				State 1/3	9,900			HEW Guidance 50% ESEA Title II Title III	6,000	State 25%	2225		
	middle- 3000 children	13,500				City 2/3	20,000					City	720		
	high school - 2400 children (10% of middle and high in private schools)	10,800													
	public school total- 11,860		8,895												

TOPIC AREAS	ASSUMPTIONS	CAPITAL COSTS	OPERATING COSTS	SOURCE OF CAPITAL COSTS						SOURCE OF OPERATIVE COSTS					
				Federal		State & Other		Developer		Federal		State & Other		Developer	
				Source	Amt.	Source	Amt.	Source	Amt.	Source	Amt.	Source	Amt.	Source	Amt.
CIVIC CENTER	Court, CDC offices, little city hall, Post Office, private institutions	1,000	750	P.C. Lease Const. Prog.	1,000						750				
									800		14,100		6,745		2,150
	TOTAL	40,200	24,295		8,700		30,700		40,200						24,295